

LEST WE FORGET: UNIT V: HUMAN PHYSIOLOGY

1. It is essential that lungs are situated in an air-tight thoracic chamber. We cannot directly alter the pulmonary volume.
2. Binding of haemoglobin with oxygen is PRIMARILY related to the partial pressure of oxygen. Binding of haemoglobin with carbon dioxide is PRIMARILY related to the partial pressure of carbon dioxide.
3. Pneumotaxic centre moderates the function of respiratory rhythm centre and can reduce the duration of inhalation and thereby alter the respiratory rate.
4. Basophils secrete histamine in blood and mast cells secrete histamine in tissues.
5. Exchange of nutrients, gases, etc., between the blood and the cells always occurs through the interstitial fluid or the tissue fluid.
6. Closed circulatory system is considered to be more advantageous as the flow of fluid can be more precisely regulated.
7. Inter-atrial septum is a thin muscular wall.
8. The ventricular contraction starts shortly after Q in ECG.
9. Normal activity of the heart is regulated intrinsically.
10. Heart failure is also sometimes called as congestive heart failure.
11. Some amount of urea can be retained in the kidney matrix to maintain a desired osmolarity.
12. JGA is a special sensitive region formed by cellular modifications in the distal convoluted tubule and the afferent arteriole at the location of their contact.
13. Ascending limb of loop of Henle plays a critical role in concentration of urine.
14. Angiotensin II is a powerful vasoconstrictor, ANF is a vasodilator.
15. The globular myosin head is an ATPase.
16. A motor neuron along with the muscle fibres connected to it constitute a motor unit.
17. During muscle contraction, A band retains its length.

18. Costal cartilages are hyaline cartilages; pubic symphysis contains fibrous cartilage.
19. Resting axonal membrane is comparatively more permeable to potassium ions and nearly impermeable to sodium ions.
20. Electrical synapses are faster than chemical synapses but rarer.
21. Association areas are neither clearly motor nor clearly sensory in function.
22. Cerebral aqueduct passes through the mid brain.
23. Oxytocin and vasopressin are actually synthesised by hypothalamus.
24. Pineal gland is located on the dorsal side of the forebrain.
25. Thymus is located on the ventral side of aorta.
26. Hormones which interact with membrane-bound receptors normally do not enter the target cell, but generate second messengers which in turn regulate cellular metabolism.
27. Hormones which interact with intracellular receptors mostly regulate gene expression or chromosome function.
- *28. Respiratory surface must be kept moist.
- *29. Significant transfusion mismatch reactions occur between antigen of donor and antibodies of recipients and not vice-versa.
- *30. A terrestrial organism must conserve water.
- *31. ADH makes collecting duct permeable to water and urea.
- *32. Cellophane membrane acts as 'artificial' kidney during haemodialysis.
- *33. Primarily, ATP is required for the breaking (detachment) of cross-bridges. ATP is also indirectly involved in the formation of cross-bridges through its hydrolysis.
- *34. Depolarisation of axonal membrane is due to influx of sodium ions. Repolarisation, after depolarisation, is due to efflux of potassium ions.
- *35. Hypocalcaemia causes increased neuronal excitability and can lead to tetany.
- *36. Thyroid secretes a peptide hormone as well.
- *37. Progesterone is the 'pregnancy' hormone.